

Subc1
cont.

to point bi-directional radio access link for intercell communication with a base station in an adjacent cellular area, wherein said interface system includes an ATM radio interface card (ARIC) and time division multiple access (TDMA) ARICs are provided for communication from said base station to said NIUs and frequency division multiple access (FDMA) ARICs are provided for communication from said NIUs to said base station.

7. (once amended) An interface system as defined in claim [3] 6 wherein frequency division multiple access (FDMA) ARICs are provided for bi-directional intercell radio communication.

Subc2

9. (once amended) A system [as defined in claim 8] for providing broadband wireless communication over a large geographic area subdivided into a plurality of overlapping cellular areas comprising: a base station and one or more customer sites within each cellular area; and asynchronous transfer mode (ATM) radio interface cards (ARICs) at each base station for bi-directional communication with network interface units (NIUs) at the customer sites in said cellular area and for point to point bi-directional intercell radio communication with ARICs in other base stations; said system having at least one time division multiple access (TDMA) ARIC for point to multipoint communication from said base station to said NIUs and at least one frequency division multiple access (FDMA) ARIC for point to point communication from said NIUs to said base station.

10. (once amended) A system as defined in claim [8] 9 having a frequency division multiple access (FDMA) ARIC for bi-directional intercell radio communication between base stations.

11. (once amended) A system as defined in claim [8] 9 wherein one of said base stations is in communication with a network manager for controlling said system.

Sub 3
1001
15. (once amended) A method [as defined in claim 14] of providing
scaleable, broadband wireless access to a large geographic area subdivided into a
plurality of cellular areas comprising: providing a base station within each cellular
area; and providing ATM radio interface cards (ARICs) at each base station for
communicating with network interface units (NIUs) within said cellular area and for
providing a radio access link for bi-directional intercell communication with ARICs
and base stations in other cellular areas, wherein time division multiple access
(TDMA) ARICs and frequency division multiple access (FDMA) ARICs are
provided for bi-directional communication between said base station and NIUs
within a cellular area.

18. (once amended) A method as defined in claim [14] 15 wherein said
broadband wireless access is scaleable by increasing the number of ARICs at
selected base stations.

Sub 4
1004
22. (once amended) A base station [as claimed in claim 21] for use in a cell
of a cellular, broadband wireless communication network comprising: a switching
system; a first radio interface means integral to the switching system for supporting
communications between the base station and one or more network interface units
within the cell and second radio interface means integral to the switching system
for providing an intercell link whereby the base station communicates with a further
base station associated with another cell of the network, wherein the second radio
interface means includes one or more radio interface cards coupled through a
transmitter and receiver to a high gain antenna wherein the high gain antenna is
36 to 42 db and the one or more radio interface cards are connected to a combiner
which in turn is connected to the transmitter and receiver.